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<u>Clinico-microbiological Profile of Septic Diabetic Foot with Special Reference to</u> Anaerobic Infection.

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Introduction Diabetic foot infections are a major cause of non-traumatic amputations. The role of anaerobes in the prognosis of these infections is particularly unclear. This study was conducted with the aim of correlating microbiological profiles with clinical outcomes in these diabetic foot ulcer patients. Methodology This prospective observational study was done in a tertiary care centre in South India. All patients admitted with diabetic foot ulcers for two years were included in the study. Tissue biopsies were collected from the ulcer for aerobic and anaerobic cultures. The patients were grouped as those with aerobic infection alone (anaerobe negative) and those with mixed aerobic and anaerobic infections (anaerobe positive). Anaerobic culture was performed using the Robertson cooked meat (RCM) medium. The ulcer of the foot was described with respect to site, size, duration, history of previous amputation(s), and history of number and class of antibiotic intake prior to hospitalization. Clinical course and Wagner's grades of the diabetic foot ulcers were compared for aerobic and anaerobic infections. Results A total of 104 patients were included in the study. There were no significant differences between the two groups with regards to duration of diabetes, random blood sugar (RBS) at the time of admission, compliance to drugs, and mode of blood sugar control and prior intake of antibiotics. Patients with anaerobic infections were found to have a higher incidence of fever in this study (38.1% vs. 14.5%; p = 0.0057), as compared to patients with aerobic infections. More than half of the patients in the anaerobic infection group presented with Wagner's grade IV and above, as compared to the aerobic infection group (59.5% vs. 32.2%; p = 0.0059), which was statistically significant. Patients with anaerobic infections also had high numbers of major and minor amputations when compared to patients with aerobic infections. Conclusion Septic diabetic foot patients with fever at the time of admission and a high Wagner's grade have a greater chance of harbouring anaerobic infections. Drugs for anaerobic coverage should be considered for wounds

beyond Wagner's grade III. Anaerobic infections resulted in increased risk of morbidity in diabetic foot ulcer patients but did not have any influence on mortality.